

TOWN OF NEEDHAM

WETLANDS PROTECTION
REGULATIONS

PROMULGATED UNDER
NEEDHAM GENERAL BYLAWS
SECTION 6

DECEMBER, 2005

TOWN OF NEEDHAM WETLANDS PROTECTION REGULATIONS

PART I. GENERAL PROVISIONS

- 1.01 Introduction and Purpose
- 1.02 Statement of Jurisdiction
- 1.03 General Provisions Concerning Burden of Going Forward and Burden of Proof
- 1.04 Definitions
- 1.05 Procedures
- 1.06 Emergencies
- 1.07 Severability
- 1.08 Effective Date
- 1.09 Enforcement
- 1.10 Security
- 1.11 Waivers
- 1.12 Filing Fees

PART II. REGULATIONS FOR INLAND WETLANDS

- 2.01 Inland Banks
- 2.02 Vegetated Wetlands (Wet Meadows, Marshes, Swamps and Bogs)
- 2.03 Water Bodies
- 2.04 Bordering Land Subject to Flooding
- 2.05 Isolated Land Subject to Flooding
- 2.06 Buffer Zones

PART I. GENERAL PROVISIONS

1.01 INTRODUCTION AND PURPOSE

(1) Introduction

These regulations are promulgated by the Town of Needham Conservation Commission pursuant to the authority granted to it under Article 6 of the Town of Needham General By-Laws (hereinafter referred to as the “Bylaw”). These regulations shall complement the Bylaw and shall have the force of law upon their effective date.

The intent of the Wetlands Protection By-law and these regulations is to supplement the state review under Mass. General Laws Chapter 131 §40 (The Wetlands Protection Act) and its regulations (310 CMR 10.00), and to provide protection of additional resource areas not covered under the Wetlands Protection Act, including Vegetated Wetlands and the Buffer Zone.

(2) Purpose

The Bylaw sets forth a public review and decision making process by which activities having an impact or effect upon Areas Subject to Protection Under the Bylaw are to be regulated in order to ensure the protection of the following interests:

- ☐ Public water supply
- ☐ Private water supply
- ☐ Groundwater and groundwater quality
- ☐ Water quality in the numerous ponds of the Town
- ☐ Flood control
- ☐ Erosion and sedimentation control
- ☐ Storm damage prevention
- ☐ Water pollution
- ☐ Wildlife and wildlife habitat
- ☐ Fisheries

The purpose of these regulations is to define and classify that process by establishing standard definitions and uniform procedures by which the Needham Conservation Commission may carry out its responsibilities under the Bylaw.

1.02 STATEMENT OF JURISDICTION

(1) Exceptions

The permit and application required by the Bylaw and these regulations shall not be required for:

- (a) Maintaining or repairing, but not changing or enlarging, an existing and lawfully located structure or facility used in the service of the public to provide electric, gas, water, sewer, telephone, telegraph, or other telecommunications services, provided that written notice has been given to the Commission at least 14 days prior to commencement of work, and provided that the work conforms to the performance standards and design specifications of these regulations.
 - (b) Work performed for normal maintenance or improvement of land in agricultural use or aquacultural use, provided that written notice has been given to the Commission at least 14 days prior to the commencement of work.
 - (c) Emergency projects necessary for the protection of the health or safety of the public, as determined by the Commission, in such circumstances and upon such conditions as it deems appropriate, after advance written notice has been received by the Commission prior to commencement of any work except for emergency response to safeguard life, health, and property damage.
- (2) Resource Areas Subject to Protection Under the Bylaw. The following resource areas are subject to protection under the Bylaw:
- (a) Any freshwater wetland, including marsh, wet meadow, bog, or swamp
 - (b) Any bank of a lake, pond, river, stream, or other watercourse
 - (c) Any waterbody or waterway, including any lake, river, pond, stream, or watercourse
 - (d) Any land within 100 feet of any of the areas set forth in Section 1.02 (1) (a-c) above (the 'Buffer Zone')
 - (e) Any land subject to flooding or inundation by groundwater or surface water.
- (3) Activities Subject to Regulation Under the Bylaw
- (a) Any activity proposed or undertaken which will constitute removing, filling, dredging, building upon, or altering, any area specified in Section 1.02(2) is subject to regulation under the Bylaw and requires the filing of an Application for Permit.
 - (b) Any activity proposed or undertaken outside the area specified in Section 1.02(2) above shall not be subject to regulation under the Bylaw unless, in the judgment of the Conservation Commission, said activity will result or has resulted in the removing, filling, dredging, building upon, or altering an area specified in Section 1.02(1) above.
 - (c) Any person who wishes to know whether or not a proposed activity or an area is subject to the Bylaw may in writing request a determination from the Conservation Commission. Such a Request for Determination of Applicability shall be submitted pursuant to Section 1.05 of these regulations.

(4) Minor Activities Exempt from Regulation Under the Bylaw

Certain minor activities within the Buffer Zone are not likely to alter a Resource Area subject to regulation under the Bylaw and are therefore exempt from the requirement to obtain a Negative Determination of Applicability or Order of Conditions (Permit). Except for the work described in (a) below, written notification must be submitted to the Commission at least 10 business days before work can be started. The Commission may require a Notice of Intent or Request for Determination of Applicability. If the Commission determines that the proposed work requires formal review pursuant to a Notice of Intent or Request for Determination, it shall notify the applicant in writing within 5 business days of receiving the written notification. These minor activities include:

- (a) Mowing and maintenance of lawfully existing lawns and gardens, provided that no fertilizers, herbicides, or pesticides are used. Lawn clippings, leaves, brush, and other landscape debris may not be deposited in a vegetated wetland, bank, water body, or buffer zone.
- (b) Exploratory borings, test wells, and soil tests if conducted within the Buffer Zone using a hand or motorized drill. Test pits excavated using a backhoe or similar equipment are not exempted from the requirement to obtain a Negative Determination of Applicability or Order of Conditions (Permit).
- (c) Installing fencing within the Buffer Zone, provided it will not constitute a barrier to wildlife movement.
- (d) Planting native species of trees, shrubs, or herbaceous species within the Buffer Zone, provided that existing vegetation (except lawn and ornamental gardens) is not removed or otherwise disturbed, and that no planting occurs within 25 feet of the edge of a wetland or bank. Planting a lawn is not exempted from the requirement to obtain a Negative Determination of Applicability or Order of Conditions (Permit).

1.03 GENERAL PROVISIONS CONCERNING BURDEN OF GOING FORWARD AND BURDEN OF PROOF

- (1) The Applicant shall have the burden of going forward by providing credible evidence from a competent source in support of all matters asserted by the Applicant in accordance with his or her burden of proof pursuant to Section 1.03(2) below.
- (2) The applicant shall have the burden of proving by a preponderance of the credible evidence that the activities proposed in the application will not harm the interests protected by this Bylaw. Failure to meet the burden of proof shall be cause for the Commission to deny the Application for Permit along with any work or activity proposed therein.

1.04 DEFINITIONS

Activity means any form of draining, dumping, dredging, damming, discharging, excavating, filling or grading; the erection, reconstruction, or expansion of any buildings or structures; the driving of pilings; the construction or improvement of roads and other ways; the changing of runoff characteristics; the intercepting or diverting of ground or surface water; the installation of drainage, sewage, and water systems; the discharging of pollutants; the destruction of plant life; and any other changing of the physical characteristics of land, or of the physical, biological, or chemical characteristics of water.

Alter means to change the conditions of any Area Subject to Protection Under the Bylaw. The term “alter” shall include, without limitation, the following activities when undertaken to, upon, within, or affecting the resource areas protected by this Bylaw:

- (a) Removal, excavation, or dredging of any soil, sand, gravel, sediment, or aggregate materials of any kind;
- (b) Changing pre-existing drainage characteristics, flushing characteristics, salinity distribution, sedimentation patterns, flow patterns, or flood retention characteristics;
- (c) Draining or other disturbance of water level or water table;
- (d) Dumping, discharging or filling with any material;
- (e) Placing fill, or removing material;
- (f) Driving piles, erecting buildings or structures of any kind;
- (g) Placing obstructions or objects in water;
- (h) Destroying plant life, including cutting living or dead trees, landscaping, or replacing existing plant life with lawns;
- (i) Changing water temperature, biochemical oxygen demand, or other physical or chemical characteristics of water;
- (j) Any activities, changes or work which may cause or tend to contribute to pollution of any body of water or groundwater.

Aquaculture means the growing of aquatic organisms under controlled conditions, including but not limited to finfish, shellfish, amphibians, reptiles and seaweeds.

Bank means that portion of the land surface which normally abuts and confines a stream, river, pond or lake. The upper boundary of a Bank is the first observable break in slope or the mean annual high water level, whichever is lower. The lower boundary of a Bank is the mean annual low water level.

Best Available Measures means the most up-to-date technology or the best designs, measures, or engineering practices that have been developed and that are commercially available.

Best Practical Measures means technologies, designs, measures, or engineering measures or engineering practices that are in general use to protect like or similar interests.

Bog means any area where standing or slowly running water is near or at the surface during a normal growing season, and where the vegetational community has a significant portion of the water or surface covered with sphagnum moss, and where the vegetational community is made up of a significant portion of one or more of, but not limited to nor necessarily all of, the following plants or groups of plants: azaleas (*Rhododendron canadense* and *R. viscosum*), black spruce (*Picea mariana*), bog cotton (*Eriophorum*), cranberry (*Vaccinium macrocarpon*), highbush blueberry (*Vaccinium corymbosum*), larch (*Larix laricina*), laurel (*Kalmia polifolia* or *K. angustifolia*), leatherleaf (*Chamaedaphne calyculata*), orchids (*Pogonia*, *Calopogon*), pitcher plant (*Sarracenia purpurea*), sundews (*Drosera*), bog aster (*Aster nemoralis*), sweet gale (*Myrica gale*), white cedar (*Chamaecyparis thyoides*), sedges (*Dulichium arundinaceum*, *Carex canescens*, *Rhynchospora*, *Cladium mariscoides*).

Bordering means touching.

Boundary means the boundary of the Area Subject to Protection Under the Bylaw.

Buffer Zone means any land within 100 feet of a waterbody, a bank, or a vegetated wetland (the resource areas defined in Section 1.02(1)(a-c) above).

Certificate of Compliance means a written determination by the Conservation Commission that the proposed work or a portion thereof has been completed in accordance with a pertinent Permit.

Commission means the Needham Conservation Commission.

Conditions mean those requirements set forth in a written Permit issued by the Conservation Commission for the purposes of permitting, regulating, or prohibiting any activity that removes, fills, dredges, builds upon, or alters an Area Subject to Protection Under the Bylaw.

Conservation Commission means that body comprised of members lawfully appointed pursuant to MGL c. 40 s. 8C.

Creek means the same as stream.

Date of Issuance means the date a Permit, Determination, or Certificate of Compliance is mailed, as evidenced by a postmark or the date it is hand delivered.

Date of Receipt means the date of delivery to an office, home, or usual place of business by mail or hand delivery.

Department means Massachusetts Department of Environmental Protection (DEP).

Determination (of Applicability) means a written finding by the Commission as to whether a site or the activity proposed thereon is subject to the jurisdiction of the Bylaw.

Dredge means to deepen, widen, or excavate a vegetated wetland or waterbody, whether temporarily or permanently.

Erosion Control means the prevention or reduction of the detachment or movement of soil or rock fragments by water, wind, ice, and/or gravity.

Extension Permit means a written extension of time within which the authorized activity shall be completed.

Fill means to deposit any material so as to raise an elevation, either temporarily or permanently.

Flood Control means the prevention or reduction of flooding and flood damage.

Freshwater Wetlands means any area where the topography is low and flat, where soils are annually saturated (as demonstrated by the presence of hydric soils), and where the vegetation community is composed of species adapted to or characteristic of saturated soil conditions.

Ground Water Supply means water below the earth's surface in the zone of saturation.

Interests mean the wetland values (collectively, the "interests protected by this Bylaw") specified in Section 6.01 of the Bylaw and Section 1.01(2) of these regulations.

Hydric Soil means any soil which displays characteristics normally associated with annual saturation or inundation, including (a) the presence of a dark organic layer at least 6 inches thick; (b) the layer under the A horizon has a chroma less than or equal to 2; and/or (c) the layer under the A horizon contains prominent high-chroma mottles.

Issuing Authority means the Conservation Commission.

Lake means any open body of fresh water with a surface area of 10 acres or more, and shall include Great Ponds.

Land Subject to Flooding or Inundation by groundwater or surface water means areas inundated by flood waters arising from creeks, rivers, streams, ponds, lakes, or water courses, and isolated or closed basins which, at least once a year, confine standing water to an average depth of six (6) inches and a surface area of at least 2,000 square feet.

Land Under Water Bodies means the land under the surface of any lake, river, pond, stream, or watercourse. The boundary of Land Under Water Bodies is the mean annual low water level.

Lawfully Existing means existing prior to the effective date of the Needham General Wetlands Protection By-Law (May 23, 1988) or permitted by the Conservation Commission

subsequent to that date through issuance of a Negative Determination of Applicability or Order of Conditions.

Majority means more than half of the members of the Conservation Commission then in office.

Marsh means any area where standing or slowly running water is near or at the surface during a normal growing season, and where a significant part of the vegetational community is composed of, but not limited to nor necessarily all of, the following plants or groups of plants: bladder worts (*Utricularia*), bur-reed (*Sparganium*), button bush (*Cephalanthus occidentalis*), cattails (*Typha*), duck weeds (*Lemna*), hydrophilic grasses (*Calamagrostis Canadensis*, *Phalaris arundinacea*, *Phragmites australis*, *Glyceria*), pickerel weed (*Pontederia*), pipewort (*Eriocaulon*), rushes (*Juncus*), hydrophilic sedges (*Scirpus cyperinus*, *Carex stricta*, *Carex lacustris*, *Carex crinita*, *Carex lurida*, *Eleocharis*, *Rhynchospora*), hydrophilic smartweeds (*Polygonum*), water willow (*Decodon*), arrowhead (*Sagittaria*), or sweet flag (*Acorus*).

Notice of Intent means the written notice filed by any person intending to remove, fill, dredge, or alter an Area Subject to Protection under the Bylaw.

Obstructions or Objects in water means but is not limited to dams, weirs, sluiceways, docks, bulkheads, pilings, slips, floats or cofferdams.

Order means an Order of Conditions, Superseding Order, or Final Order, whichever is applicable, issued pursuant to MGL c. 131 s. 40.

Party to any proceeding means the Applicant, the Conservation Commission and, pursuant to Section 1.05, may include the owner of the site, any abutter, any person aggrieved, any ten residents of Needham, and any ten persons pursuant to MGL c. 30A, s. 10a.

Permit means the document issued by the Commission containing conditions which regulate or prohibit an activity under the Bylaw. The Commission in an appropriate case may combine the permit or other action on an application issued under the Bylaw with the Order of Conditions issued under the Wetlands Protection Act, MGL c. 131 s. 40.

Person Aggrieved means any person who, because of an act or failure to act by the issuing authority, may suffer an injury in fact which is different either in kind or in magnitude from that suffered by the general public and which is within the scope of the interests identified in the Bylaw. Such persons must specify in writing sufficient facts to allow the Conservation Commission to determine whether or not the person is in fact aggrieved.

Plans mean such data, maps, engineering drawings, calculations, specifications, schedules, and other materials, if any, deemed necessary by the Conservation Commission to describe the site and the activity; to determine the applicability of the Bylaw; or to determine the impact of the proposal upon the interests identified in the Bylaw.

Pond means any open body of fresh water, either naturally occurring or man-made by impoundment or excavation, which is not without water due to natural causes for more than

six months of the year, except during periods of extended drought. For purposes of this definition, extended drought shall mean any period of four or more months during which the average rainfall for each month is 50 percent or less of the ten-year average for the same month. Basins or lagoons which are part of waste water treatment plants shall not be considered ponds, nor shall swimming pools or other impervious man-made retention basins.

Prevention of Pollution means the prevention or reduction of contamination of surface or ground water.

Private Water Supply means any source or volume of surface or ground water demonstrated to be in any private use, or demonstrated to have a potential for private use.

Protection of Fisheries means protection of the capacity of an Area Subject to Protection Under the Bylaw to prevent or reduce contamination or damage to fish, and to serve as the habitat and nutrient source for fish.

Public Water Supply means any source or volume of surface or ground water demonstrated to be in public use or approved for water supply pursuant to MGL c. 111, s. 160 by the Division of Water Supply of the DEP, or shown to have a potential for public use.

Quorum means the majority of the duly appointed members of the Conservation Commission that when duly assembled is legally empowered to transact business.

Remove means to take away any type of material, thereby changing an elevation, either temporarily or permanently.

Request for Determination of Applicability means a written request made by any person to the Conservation Commission for a determination as to whether a site or a proposed activity thereon is subject to the Bylaw.

Resource Area is synonymous with Resource Area Subject to Protection under the Bylaw, each one of which is enumerated in Section 1.02(1) of these regulations.

River means a naturally flowing body of water that empties to any ocean, lake, pond, or other river, and which flows throughout the year.

Sedimentation Control means the prevention or reduction of the collection or concentration of sand, soil or rock fragments by the action of water, wind, ice, or gravity.

Significant means plays a role. A resource area is significant to an interest identified in the Bylaw when it plays a role in the provision or protection, as appropriate, of that interest.

Storm Damage Prevention means the prevention of damage caused by water from storms, including but not limited to: erosion and sedimentation, damage to vegetation, property or buildings, or damage caused by flooding, waterborne debris, or waterborne ice.

Stream means a body of running water, including brooks, creeks, and other watercourses, which moves in a defined channel in the ground due to a hydraulic gradient. A portion of a

stream may flow through a culvert or beneath a bridge. A stream may be intermittent (i.e., does not flow throughout the year).

Swamp means any area where standing or slowly running water is near or at the surface during a normal growing season, and where the vegetational community is made up of a significant portion of one or more of, but not limited to nor necessarily all of, the following plants or groups of plants: alders (*Alnus*), ashes (*Fraxinus pensylvanica*), azala (*Rhododendron canadense* or *R. viscosum*), winterberry (*Ilex verticillata*), highbush blueberry (*Vaccinium corymbosum*), red maple (*Acer rubrum*), poison sumac (*Toxicodendron vernix*), spicebush (*Lindera benzoin*), sweet pepperbush (*Clethra alnifolia*), black gum (*Nyssa sylvatica*), swamp white oak (*Quercus bicolor*), willow (*Salix*), skunk cabbage (*Symplocarpus foetidus*), cinnamon fern (*Osmunda cinnamomea*), or royal fern (*O. regalis*).

Vegetated Wetland means any area where the soils are annually saturated (hydric) and where at least 50 percent of the plant community consists of wetland plant species. Vegetated Wetlands include bogs, marshes, wet meadows, and swamps.

Vernal Pool means any vegetated wetland or area subject to flooding which provides breeding habitat for obligate vernal pool species such as wood frogs (*Rana sylvatica*), spotted salamanders (*Ambystoma maculata*), blue-spotted salamanders (*A. laterale*), or fairy shrimp, and which may be without standing water during late summer.

Wet Meadow means any area where standing or slowly running water is near or at the surface during a normal growing season, and where the vegetational community is made up of a significant portion of one or more of, but not limited to nor necessarily all of, the following plants or groups of plants: marsh fern (*Thelypteris palustris*), sensitive fern (*Onoclea sensibilis*), sedges (*Scirpus cyperinus*, *Carex stricta*, *C. stipata*, *Eleocharis*), hydrophilic grasses (*Calamagrostis Canadensis*, *Glyceria*), rushes (*Juncus*), blue flag (*Iris versicolor*), vervain (*Verbena hastata*), joe-pye-weed (*Eupatorium maculatum*, *E. dubium*), boneset (*Eupatorium perfoliatum*), and meadowsweet (*Spiraea latifolia*, *S. tomentosa*).

Wetland Plant Species means those species listed as occurring in bogs, marshes, swamps, or wet meadows, as well as any other plant species known to occur primarily in wetlands, and including all species classified as Obligate, Facultative-Wetland, or Facultative + according to the most recent edition of the National List of Wetland Indicators published by the United States Fish and Wildlife Service.

Wildlife Habitat means areas having a plant community composition and structure, hydrologic regime, or other characteristics sufficient to provide shelter, nutrients, growing conditions, nesting or breeding sites conducive to the propagation and preservation of wildlife.

Wildlife means any non-domesticated native mammal, bird, reptile, amphibian, fish, mollusk, arthropod, or other invertebrate other than a species of the Class Insecta which has been determined by the Commission to constitute a pest whose protection under the Bylaw would be a risk to humans.

Work means the same as Activity.

1.05 PROCEDURES

(1) Time Periods

All time periods of ten days or less specified in the Bylaw and these regulations shall be computed using business days only. In the case of a Determination or Application for Permit such period shall commence on the first day after the date of issuance, and shall end at the close of business on the tenth business day thereafter. All other time periods specified in the Bylaw and these regulations shall be computed on the basis of calendar days, unless the last day falls on a Saturday, Sunday or legal holiday, in which case the last day shall be the next business day following.

(2) Actions by Conservation Commission

Where the Bylaw states that a particular action (except receipt of a Request for Determination or Application for Permit) is to be taken by the Commission, that action is to be taken by more than half the members present at a meeting of at least a quorum. A quorum is defined as a majority of the members then in office. Where the Bylaw states that a permit or notification shall be issued by the Conservation Commission, that action is to be taken by a majority of the members then in office, who need not convene as a body in order to sign said permit or notification, provided they met pursuant to the open meeting law, MGL c. 39 ss 23A-23C, when voting on the matter.

Where the Bylaw states that the Conservation Commission is to receive a Request or Notice, Conservation Commission means a member of the Commission or an individual designated by the Commission to receive such request or notice.

(3) Determinations of Applicability

A Request for Determination of Applicability is a formal request that the Commission determines, with respect to the Bylaw, whether an area is subject to jurisdiction under the Bylaw, or whether an activity is likely to alter an Area Subject to Protection Under the Bylaw. Certain minor activities, while within the Buffer Zone to a vegetated wetland, bank, or water body, are unlikely to alter the ability of the resource area to protect the interests of the Bylaw. These minor activities, listed below, require review by the Commission under a Determination of Applicability but do not normally require review under a Notice of Intent (Permit Application):

- ☐ Constructing an unpaved walkway for pedestrian use.
- ☐ Installing a shed, less than or equal to 100 square feet in floor area, on blocks or piles, on an existing lawn.
- ☐ Converting lawn within the Buffer Zone to a structure or impervious surface accessory to an existing single-family house (adding a deck, porch, garage, or addition) if the structure or new impervious surface is less than or equal to 500 square

feet in floor area; work is more than 25 feet from the edge of the vegetated wetland, bank or water body; and adequate erosion controls are used.

- Removing invasive plant species within the buffer zone, vegetated wetland, bank, land subject to flooding, water body or waterway.

(a) Requests for Determination of Applicability

1. Any person who desires a determination as to whether the Bylaw applies to a site or to an activity that may affect an Area Subject to Protection Under the Bylaw, may submit to the Commission by certified mail or hand delivery eight (8) copies of a Request for Determination of Applicability.

The Request for Determination of Applicability form shall be the same as that required by Massachusetts General Laws Chapter 131 §40 and 310 CMR 10.00, as amended, so that no separate submission is necessary to comply with the Bylaw. The Request for Determination of Applicability shall include:

- (a) An 8 ½ x 11 inch locus map sufficient to show the location of the affected area, including streets and abutters.
 - (b) A drawing showing boundaries of all resource areas subject to protection under the Bylaw. The Commission strongly encourages and may require that such drawings be prepared by a registered professional engineer, land surveyor, or wetland professional. A plot plan, as required in an application for a Building Permit, may be submitted to meet this requirement.
 - (c) When the Request for Determination of Applicability includes any work under the jurisdiction of the Bylaw, the drawing shall show the exact location of that work, including the minimum distance of resource areas from the limit of proposed work.
 - (d) A written description of the work proposed, including a description of any excavation, proposed structures, and erosion and sedimentation controls.
 - (e) The appropriate filing fee as defined in Section 1.12 of these Regulations.
2. Any person filing a Request for Determination with the Commission at the same time shall give written notice thereof in accordance with Section 6.5 of the Bylaw, by certified mail or hand delivery to all abutters according to the most recent records of the Assessors, including those across a traveled way, and to all other persons as the Commission shall in writing require. The notice shall enclose a copy of the request with plans, or shall state where copies may be examined. The notice shall provide the time and place of the public hearing at which the Determination shall be made. Written notice shall

be provided to all abutters not less than five (5) business days prior to such hearing.

3. When a person requesting a Determination is other than the owner, the request, the notice of the hearing, and the determination itself shall be sent by the Applicant to the owner as well as to the person making the request, and the Applicant shall supply the Commission with the name and current address of the owner.

(b) Determination of Applicability

1. Within 45 days after receipt of a Request for Determination of Applicability, the Commission shall hold a public hearing on the Request. Notice of the time and place of the public hearing at which the Determination will be made shall be given by the Commission, at the expense of the person making the request, not less than five (5) days prior to such hearing, by publication in a newspaper of general circulation in the Town, and by mailing a notice to the person making the Request and to the owner. Notice shall also be given in accordance with the Open Meeting Law, MGL c. 39, s. 23B.
2. At the Public Hearing, the Commission will determine:
 - (b) Positively: that the area is subject to the jurisdiction of the Bylaw, or that the activity proposed is deemed likely to affect one or more of the interests protected in the Bylaw.
 - (c) Negatively: that the area is not within the jurisdiction of the Bylaw, or that the proposed activity is not likely to affect one or more of the interests protected by the Bylaw.
3. The Determination shall be signed by a majority of the Commission and shall be sent by the Commission to the person making the Request and the Owner within 21 days of the close of the public hearing or any continuance thereof.
4. A Determination shall be valid for three years from the date of issuance.
5. In the event of a Positive Determination for any Activity, an Application for Permit (Notice of Intent) shall be filed and all of the procedures set forth in Section 1.05(4) shall apply, prior to the start of any work.

(4) Application for Permit (Notice of Intent)

- (a) Any person who proposes to do work that will remove, fill, dredge, build upon, or alter any Area Subject to Protection Under the Bylaw shall submit eight (8) copies of an Application for Permit and other application materials in accordance with the

submittal requirements set forth below. This submittal shall be made by hand or certified mail.

The Application for Permit form shall be the same as that required by Massachusetts General Laws Chapter 131 §40 and 310 CMR 10.00, as amended, so that no separate submission form is necessary to comply with the Bylaw. The Application for Permit shall include:

- ❑ A Notice of Intent Form
- ❑ A locus map, based on the appropriate USGS quad sheet
- ❑ Drainage calculations must be submitted for any project with a greater than 5 percent increase in impervious surfaces. Drainage calculations must include existing and proposed runoff rates for the 2, 10, 50, and 100-year frequency storm events; existing and proposed flood elevations in adjacent wetlands and in any proposed detention basins, for each of these events; and runoff rates at all point-source discharges.
- ❑ The appropriate filing fees, based on the calculation sheet required by the Massachusetts Department of Environmental Protection and the Needham Bylaw (Section 1.12 of these Regulations, must be submitted with an explanation of how the fee was calculated.
- ❑ Project plans showing existing and proposed conditions.
- ❑ Wildlife habitat assessment, where alterations to a resource areas or the Buffer Zone, are proposed.
- ❑ Documentation to support the delineation of Vegetated Wetland. This documentation must be quantitative, and must demonstrate that the contribution of wetland vegetation to the area above (upgradient) of the wetland boundary is less than 50 percent and that there is no evidence (hydric soils or other documentation) of a wetland hydrology upgradient of the delineated boundary.
- ❑ If a Waiver is requested, the Applicant is required to provide documentation to demonstrate that the proposed project meets the criteria set forth in Section 1.11 below.
- ❑ Required Project Plans
 - All plans submitted to the Commission must be stamped and signed by a Professional Engineer or Registered Land Surveyor, and must conform with the following guidelines:
 - All plans shall be at the scale of 1"=40' or 1"=20'.
 - The boundaries of all resource areas shall be clearly shown.

- The 100-foot Buffer Zone from all pertinent resource areas shall be clearly shown.
 - The locations and numbers of all wetland flags must be clearly shown.
 - Certification from the wetlands biologist responsible for the wetland delineation must be provided, stating the basis for the wetland delineation; the date on which the delineation was performed; and stating that the flagging as indicated on the plans appears to be correct.
 - All existing and proposed grades must be shown, based on one-foot contours. Plans must also show all roads, paths, stone walls, and structures present on the site.
 - The limit of work or clearing must be shown, together with the minimum distance to any resource area.
 - All erosion control measures must be shown, and must be sufficient to prevent any silt or sediment from entering the wetland resource areas. Plans must indicate the type of erosion measures to be used, details showing the installation of such measures, and the locations of any areas to be revegetated following construction.
- (b) The Commission in an appropriate case may accept as the application and plans under this Bylaw the Notice of Intent and plans filed under the Wetlands Protection Act, MGL ch. 131 s. 40.
- (c) Any person filing an Application for Permit with the Commission under the Bylaw at the same time shall give written notice thereof in accordance with Section 6.5 of the Bylaw, by certified mail or hand delivered, to all abutters according to the most recent records of the assessors, including those across a traveled way, and to all other persons as the Commission shall in writing require. The notice shall enclose a copy of the application with plans, or shall state where copies may be examined, and shall provide the time and place of the public hearing. Written notice shall be provided to all abutters not less than five (5) business days prior to the hearing.
- (d) When a person filing an application is other than the owner, the application and notice of the hearing shall be sent by the Applicant to the Owner. The applicant shall supply the Commission with the name, current address and telephone number of the owner. In the event that the applicant is not the owner, the owner must co-sign the application or provide the Commission with written evidence that the owner is aware of the application and consents to the proposed work.
- (e) Within fourteen (14) days of receipt of an Application for a Permit, the Commission shall issue a file number and schedule a hearing, or notify the applicant by mail, to the address provided in the application, if the application is not complete. In the event that notice is given to the Applicant or his Representative pursuant to Section 4(d)

above that the application is not complete, the 45-day period described in this paragraph shall not commence until the application is deemed complete by the Commission. The designation of a file number shall not imply that the plans and supporting documents have been judged adequate for the issuance of a permit but only that copies of the minimum submittal requirements have been filed. In an appropriate case, the Commission may use the same file number issued by DEP.

- (f) In the event that only a portion of a proposed project or activity lies within an Area Subject to Protection Under the Bylaw, all aspects of the project must be described in the detail called for by the General Instructions provided, also that in such circumstances the Application for Permit shall also contain descriptions and calculation of peak flow and estimated water quality characteristics of discharge from a point source (both closed and open channel) when the point of discharge falls within an Area Subject to Protection Under the Bylaw.
 - (g) Notwithstanding the foregoing, when the Commission has determined that an activity outside the Areas Subject to Protection Under the Bylaw has in fact altered an Area Subject to Protection Under the Bylaw, it may require such plans, supporting calculations, and other documentation as are necessary to describe the entire activity.
 - (h) An Application for Permit may be rejected by the Commission if:
 - 1. The filing is deemed incomplete;
 - 2. A Special Permit or Variance from the Zoning Board of Appeals is required and has not been obtained; or
 - 3. A Board of Health Permit is required and has not been applied for.
- (5) Public Hearing on Applications for Permit
- (a) A public hearing on an Application for Permit shall be held by the Commission within 45 days of receipt of the minimum submittal requirements set forth in Section 1.05(4)(a) and shall be advertised by the Commission, at the expense of the applicant, no less than five (5) business days prior to the hearing in a newspaper of general circulation in the Town and in accordance with the requirements of the open meeting law, MGL c. 39, §23B. Notice of the hearing shall be mailed by the Commission to the applicant and to the owner if other than the applicant.
 - (b) The Commission in an appropriate case may combine its hearing under the Bylaw with the hearing conducted under the Wetlands Protection Act, MGL c. 141 §40.
 - (c) Public Hearings may be continued as follows:
 - 1. Without the consent of the applicant to a date certain, for reasons stated at the hearing, which may include receipt of additional information offered by the applicant or others, information and plans required of the applicant, additional

information deemed necessary by the Commission in its discretion, or comments and recommendations of other local or state boards and officials;

2. With the consent of the applicant, to an agreed-upon date, which shall be announced at the hearing; or
3. With the consent of the applicant for a period not to exceed 21 days after the submission of a specified piece of information or the occurrence of a specific action. The date, time and place of said continued hearing shall be publicized in accordance with the Bylaw, and notice shall be sent to all abutters according to the most recent records of the assessors, including those across a traveled way, and to all other persons as the Commission shall in writing require.

(6) Permits Regulating the Work

- (a) Within 21 days of the close of the public hearing, the Commission shall issue or deny the Permit.
- (b) If the Permit is issued, it shall impose such conditions as are necessary for the protection of one or more of the interests identified in the Bylaw. The Permit shall prohibit any work or portions thereof that cannot be conditioned to protect said interests.

The Permit shall impose conditions on the work or portion thereof that will, in the judgment of the Commission, result in the removing, dredging, filling, building upon, or altering an Area Subject to Protection Under the Bylaw. The Permit shall impose conditions setting limits on the quantity and quality of discharge from a point source (both closed and open channel) when said limits are necessary to protect the interests identified in the Bylaw.

- (c) If the Permit is denied, it shall be for one or more of the following reasons:
 1. For failure to meet the requirements of the Bylaw
 2. For failure to submit necessary information or plans requested by the Commission;
 3. For failure to meet design specifications, performance standards, or other requirements of these regulations;
 4. For failure to avoid or prevent unacceptable or cumulative effects upon the wetland values protected by the Bylaw;
 5. Where no conditions are adequate to safeguard the wetland values protected by the Bylaw.

- (d) A Permit shall be valid for three (3) years from the date of its issuance.

- (e) The Permit shall be signed by a majority of the Commission and shall be mailed or hand delivered to the applicant, the applicant's agent, or the owner of record.
- (f) A copy of the plans describing the work and the Permit shall be kept on file by the Commission and shall be available to the public at reasonable hours.
- (g) Prior to the commencement of any work permitted or required by the Permit, the Permit shall be recorded in the Registry of Deeds or the Land Court for the district in which the land is located within the chain of title of the affected property. In the case of recorded land, the permit shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of registered land, the Permit shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is to be done. Certification of the recording shall be sent to the issuing authority. If work is undertaken without the applicant first recording the Permit, the issuing authority may issue an Enforcement Order or may itself record the Permit.
- (h) For good cause the Commission may revoke or modify a Permit issued under this Bylaw after public notice and public hearing, and notice to the holder of the Permit.
- (i) The Commission in an appropriate case may combine the Permit or other action on an application issued under the Bylaw with the Order of Conditions issued under the Wetlands Protection Act, MGL c. 131 s. 40.

(7) Extensions of Permits

- (a) The Commission may extend a permit once for an additional one-year period except as described in (b) below. Requests for extensions shall be made to the Commission in writing at least thirty days prior to the expiration of the permit.
- (b) The Commission may extend a permit for an additional three-year period for ongoing public maintenance projects, nuisance vegetation management, or public improvement projects that cannot reasonably be completed within 4 years of the issuance of an Order of Conditions (Permit).
- (c) The Commission may deny the request for an extension and require the filing of a new Application for Permit for the work or remaining work, as the case may be.
- (d) If issued by the Conservation Commission, the Extension Permit shall be signed by a Majority of the commission.
- (e) The Extension Permit shall be recorded in the Land Court or the Registry of Deeds, whichever is appropriate. Certification of recording shall be sent to the Commission. If work is undertaken without the Applicant so recording an Extension Permit, the Commission may issue an Enforcement Order or may itself record the Extension Permit.

(8) Certificates of Compliance

- (a) Upon written request by the Applicant, together with all information required in (d) below and any other requirements as may be set forth in the Permit, a Certificate of Compliance shall be issued by the Commission within 21 days of receipt thereof, and shall certify that the activity or portions thereof described in the Application for Permit and plans has been completed in compliance with the Permit. If issued by the Commission, the Certificate of Compliance shall be signed by a majority of the Commission.
- (b) Prior to the issuance of a Certificate of Compliance, a site inspection shall be made by the Conservation Commission,
- (c) If the Commission determines, after review and inspection, that the work has not been done in compliance with the Permit, it may refuse to issue a Certificate of Compliance. Such refusal shall be issued within 21 days of receipt of a Request for a Certificate of Compliance, shall be in writing, and shall specify the reasons for denial.
- (d) All requests for Certificates of Compliance shall be accompanied by a written statement by a registered professional engineer, architect, landscape architect, or land surveyor, certifying that there has been full compliance with the terms of the Permit and with the plans submitted with the Application. If the project is not fully in compliance with the Plans and Permit, the request for a Certificate of Compliance must fully describe in detail all work not completed in accordance with the Plans and Order.
- (e) If the Permit contains conditions which continue past the completion of the work, such as maintenance or monitoring, the Certificate of Compliance shall specify which, if any, of such conditions shall continue. The Certificate shall also specify to what portions of the work it applies, if it does not apply to all the work regulated by the Permit.
- (f) In the event that the Permit allows replication, replacement, or restoration of any Resource Area, conditions pertaining to same shall continue for two growing seasons after planting has been completed. No Certificate of Compliance shall be issued until such replication, replacement or restoration has been completed in accordance with the conditions of the Permit. At its discretion, the Commission may issue a Partial Certificate of Compliance if all other requirements of the Order have been fully complied with prior to the full establishment of the replication or restoration area.
- (g) The Certificate of Compliance shall be recorded in the Land Court or Registry of Deeds, whichever is appropriate. Certification of recording shall be sent to the Commission.

1.06 EMERGENCIES

- (1) Any person requesting permission to do an emergency project shall specify why the project is necessary for the protection of the health or safety of the public and what

agency of the Commonwealth or subdivision thereof is to perform the project or order it to be performed.

- (2) The request may be written or oral, but if oral must be confirmed by written notice within 24 hours of work commencement, and request must be made prior to commencement of any work, except for emergency response by public officials to safeguard life, health, and property damage.
- (3) A majority of the Commission must certify the work as an emergency project to be performed only for the time and place certified by the Commission for the limited purpose of abating the emergency.
- (4) Within 21 days of commencement of an emergency project, a Permit Application shall be filed with the Commission for review as provided in the Bylaw and in this regulation.
- (5) An emergency certification shall be issued only for the protection of public health or safety or the protection of wetland resource areas.
- (6) The time limit for performance of emergency work shall not exceed 21 days from day of certification by the Commission.

1.07 SEVERABILITY

The invalidity of any section of these regulations shall not invalidate any other section or provision thereof, nor shall it invalidate any permit or determination which previously has been issued.

If the Court of the Commonwealth shall invalidate any provision of the Bylaw or of these regulations, the Conservation Commission shall promulgate additional regulations, or present to the next Town Meeting after such invalidation, amendments to the Bylaw or regulations which are designed to comply with any Court decision invalidating such provision or regulation, as the case may be.

1.08 EFFECTIVE DATE

The effective date of these regulations shall be January 1, 2006 and the provisions of these regulations shall apply to all work performed after that date.

1.09 ENFORCEMENT

Any person who violates any provision of the Bylaw, the rules and regulations promulgated under it, or any conditions of a valid Permit shall be punished by a fine of not more than \$200 per day for each offense that is in violation of said permit. Each day or portion thereof of continuing violation shall constitute a separate offense. The Bylaw, these rules and regulations, and all Orders of Conditions may be enforced by any Town Police Officer or any other officer having police powers. In the case of any unauthorized work, the offence shall be deemed to continue each day until the area is restored to the condition that existed prior to the commencement of unauthorized work.

The members and agents of the Commission may enter upon privately owned land for the purposes of performing their duties under the Bylaw and these rules and regulations.

When the Commission determines that an activity is in violation of the Bylaw, these rules and regulations, or a final Order of Conditions, the Commission may issue an Enforcement Order.

Violations include, but are not limited to:

- (a) Failure to comply with a Final Order, such as failure to observe a particular condition or time period specified in the Permit
- (b) Failure to complete work described in a Final Order, when such failure causes damage to the interests identified in the Bylaw;
- (c) Failure to obtain a valid Permit (Order of Conditions) or Extension Permit prior to conducting an activity subject to regulation under the Bylaw.
- (d) Conducting work that causes harm to the area protected under a Final Order.

An Enforcement Order issued by the Commission shall be signed by a majority of the Commission. In a situation requiring immediate action, an Enforcement Order may be signed by a single member or agent of the Commission (with the consent of at least one member of the Commission), provided said Order is ratified by a majority of the members at the next scheduled meeting of the Commission.

1.10 SECURITY

The Commission may require, as a permit condition, that the performance and observance of the Permit be secured by one or both of the following methods:

- (a) By a bond or deposit of money or negotiable securities in an amount and form determined by the Commission to be sufficient to secure the completion of all conservation measures specified in their Permit and the Commission may require that the applicant specify the time within which such construction shall be completed.

The penal sum of any such bond shall bear a direct and reasonable relationship to the expected costs, including the effects of inflation, necessary to complete the sub-work. Such amount or amounts shall be from time to time reduced as is, in the determination of the Commission, necessary to reflect the actual expected costs of the work remaining to be completed.

- (b) By a covenant, executed and duly recorded by the owner of record, running with the land, whereby such conservation measures as are stated in the Permit be provided before any lot may be built upon or conveyed.
- (c) The bond or covenant shall, in the case of the bond, be given to the Town and, in the case of a covenant, be recorded in the Registry of Deeds within 14 days of the granting of an Order of Conditions (Permit).

1.11 WAIVER OF REGULATIONS

Strict compliance with these rules and regulations may be waived when, in the judgment of the Commission;

- (a) such action would serve a substantial public interest,
- (b) Such action is required for compliance with the Massachusetts Contingency Plan (MCP),
- (c) strict compliance would result in severe economic hardship greater in magnitude than the public interest to be served, or
- (d) a credible expert has demonstrated that the Resource Area does not protect the public interests

No waiver shall be granted unless the Commission determines that:

- (a) there are no practicable alternatives to the proposed action;
- (b) alteration of the resource area has been minimized to the greatest extent practicable; and
- (c) that compensatory or mitigating measures are taken, even at an off-site location, to protect the public interest in the Protected Resource Area to be removed, filled, dredged, built upon, or altered.

The burden of proof shall be on the Applicant to demonstrate that the proposed project meets the standards defined in this Section.

1.12 FILING FEES

In addition to the fees charged under MGL Chapter 131, section 40, these regulations establish the fees listed below. The fees, which apply to all non-municipal projects, are deposited in the General Fund. Costs associated with the publication of legal notices are not included in the schedule of filing fees and shall be paid by the applicant directly to the newspaper publisher. No public hearing shall be opened, and no action taken on any matter before the Commission, until the appropriate filing fee has been received by the Commission.

Any fee listed in parts (a) through (d) below will be doubled for any application for a permit filed after any work within the jurisdiction of the Commission has been started or completed.

(a) A fee of \$50.00 for the following applications:

- ☐ Request for Determination of Applicability or Notice of Resource Area Delineation
- ☐ Request for Extension of Order
- ☐ Request for Minor Modification of Order of Conditions

- ❑ A Notice of Intent or Abbreviated Notice of Intent for Minor Activities (addition to an existing house, addition of a deck, landscaping within a lawn, paving an existing driveway) as defined in Section 1.05(3).

(b) A fee of \$150 for the following types of Notices of Intent:

- ❑ Demolition of an existing house and construction of a new house
- ❑ Construction of a new house
- ❑ Construction of a new or expanded commercial building and associated parking
- ❑ Any other filing within the jurisdiction of the Commission, except for those activities defined in parts (c) and (d) below.

(c) A fee of \$500 for the following applications:

- ❑ Construction of a new subdivision road, any portion of which falls within the Buffer Zone
- ❑ Any work within a resource area other than the Buffer Zone

(d) A fee of \$1000 for the following applications:

- ❑ Any work requiring a waiver in accordance with Section 1.11 of these regulations, except for reconstruction of an existing building on the same footprint, or minor activities listed in Section 1.05(3) of these regulations.

PART II REGULATIONS FOR INLAND WETLANDS

2.01 INLAND BANKS

(1) Preamble

Banks are likely to be significant to wildlife, public or private water supply, to ground water supply, to flood control, to storm damage prevention, to the prevention of pollution, and to the protection of fisheries. Where Banks are composed of concrete, asphalt, or other artificial impervious material, said Banks are likely to be significant to flood control and storm damage prevention.

Banks are areas where ground water discharges to the surface and where, under some circumstances, surface water recharges to the ground water. Where Banks are partially or totally vegetated, the vegetation serves to maintain the Bank's stability, which in turn protects water quality by reducing erosion and siltation. The vegetation present on a Bank serves to retain and take up contaminants, protecting water quality. Banks act to confine floodwaters during most storms, preventing the spread of water to adjacent land. Banks provide shade that moderates water temperatures, as well as providing breeding

habitat, escape cover, and feeding habitat, all of which are significant to the protection of fisheries. The topography, plant community composition and structure, and soil structure of Banks may provide important food, shelter, migratory and overwintering areas, and breeding areas for wildlife, where the Bank contains natural vegetation.

Land within 100 feet of a Bank is likely to be significant to the protection and maintenance of the Bank, and therefore to the protection of the interests which these resource areas serve to protect.

(2) Definitions, Critical Characteristics, and Boundary

- (a) A Bank is the portion of the land surface which normally abuts and confines a water body. A Bank may be partially or totally vegetated, or it may be comprised of exposed soil, gravel, stone, or sand.
- (b) The physical characteristics of a Bank, as well as its location, as described in the foregoing subsection (2)(a) are critical to the protection of the interests specified in Section 2.01(1).
- (c) The upper boundary of a Bank is the first observable break in the slope, or the mean annual flood level, whichever is lower. The lower boundary of a Bank is the mean annual low flow level.

(3) Performance Standards Applicable to Work On a Bank.

- (a) Any proposed work, permitted by the Commission, on a Bank shall not impair the physical stability of the Bank; the water-carrying capacity of the existing channel within the Bank; the capacity of the bank to protect ground water and surface water quality; the capacity of the Bank to provide breeding habitat, escape cover, and food for fisheries; and the capacity of the Bank to provide wildlife habitat.
- (b) Where a Bank is significant to wildlife habitat, any alteration of the Bank or the land within 25 feet of that Bank is deemed to alter the capacity of the Bank to provide wildlife habitat.
- (c) Where a Bank is significant to the protection of fisheries, any alteration of the Bank or the vegetation on that Bank is deemed to alter the capacity of the Bank to protect fisheries.
- (d) Any proposed work, permitted by the Commission, shall meet the performance standards specified in Section 2.06(3).

2.02 VEGETATED WETLANDS

(1) Preamble

Vegetated Wetlands are likely to be significant to wildlife, public or private water supply, to ground water supply, to flood control, to storm damage prevention, to the prevention

of pollution, and to the protection of fisheries. Where Banks are composed of concrete, asphalt, or other artificial impervious material, said Banks are likely to be significant to flood control and storm damage prevention.

The plant communities, soils and associated low, flat topography of Vegetated Wetlands remove or detain sediments, nutrients (such as nitrogen or phosphorus), and toxic substances (such as heavy metal compounds) that occur in run-off and flood waters.

Some nutrients and toxic substances are detained for years in plant root systems or in the soils. Others are held by plants during the growing season and released as the plants decay in the fall and winter. This latter phenomenon delays the impacts of nutrients and toxins until the cold weather period, when such impacts are less likely to reduce water quality.

Vegetated wetlands are areas where groundwater discharges to the surface and where, under some circumstances, surface water discharges to the ground water.

The profusion of vegetation and low, flat topography of Vegetated Wetlands slow down and reduce the passage of flood water during periods of peak flows by providing temporary flood water storage, and by facilitating water removal through evaporation and transpiration. This reduces downstream flood crests and resulting damage to private and public property. During dry periods the water retained in Vegetated Wetlands is essential to the maintenance of base flow levels in rivers and streams, which in turn is important to the protection of water quality and water supplies.

Wetland vegetation provides shade that moderates water temperatures important to fish life. Wetlands flooded by adjacent water bodies and waterways provide food, breeding habitat, and cover for fish. Fish populations in the larval stage are particularly dependent upon food provided by overbank flooding which occurs during peak flow periods (extreme storms), because most river and stream channels do not provide quantities of the microscopic plant and animal life required. Wetland vegetation supports a wide variety of insects, reptiles, amphibians, mammals and birds which are a source of food for important game fish.

The hydrologic regime, plant community composition and structure, soil composition and structure, topography, and water chemistry of Vegetated Wetlands and their adjacent uplands provide important food, shelter, migratory and overwintering areas, and breeding areas for many birds, mammals, amphibians, reptiles, and invertebrates.

Vegetated Wetlands, together with land within 100 feet of a Vegetated Wetland, serve to moderate and alleviate thermal shock and pollution resulting from runoff from impervious surfaces, which may be detrimental to wildlife, fisheries, and shellfish within and downstream of the vegetated wetlands.

Land within 100 feet of a Vegetated Wetland is likely to be significant to the protection and maintenance of Vegetated Wetlands, and therefore to the protection of the interests which these resource areas serve to protect.

(2) Definitions, Critical Characteristics, and Boundary

- (a) Vegetated Wetlands are freshwater wetlands. The types of freshwater wetlands are wet meadows, marshes, swamps, and bogs. They are areas where the topography is low and flat, and where the soils are annually saturated. The ground and surface water regime and the vegetational community which occur in each type of freshwater wetland are specified in Section 1.04 above.
- (b) Vegetated Wetlands which are presumed to be significant to the protected interests are any Vegetated Wetland which borders on a lake, pond, river or stream; any other area which meets the definition of Vegetated Wetland' and any area which meets the definition of Vernal Pool in Section 1.04 above.
- (c) The physical characteristics of Vegetated Wetlands, as described in the foregoing subsection 2(a), are critical to the protection of the interests specified in Section 2.02(1) above.
- (d) The boundary of Vegetated Wetlands shall be as defined in the Massachusetts Wetlands Protection Regulations, 310 CMR 10.55.

(3) Performance Standards for Work In A Vegetated Wetland

- (a) Any proposed work, permitted by the Commission, in a Vegetated Wetland shall not destroy or alter any portions of said Vegetated Wetland, nor shall the proposed work impair in any way the Vegetated Wetland's ability to perform any of the functions in Section 2.02(1).
- (b) No stormwater runoff may be allowed to discharge directly to a Vernal Pool.
- (c) Any proposed work, permitted by the Commission, shall meet the performance standards specified in Section 2.06(3).

2.03 WATER BODIES AND WATERWAYS

(1) Preamble

Water bodies and waterways are likely to be significant to wildlife, public or private water supply, to ground water supply, to flood control, to storm damage prevention, to the prevention of pollution, and to the protection of fisheries. Where the land under Water Bodies and Waterways is composed of pervious material, such land represents a point of exchange between surface and ground water.

The physical nature of land under Water Bodies and Water Ways is highly variable, ranging from deep organic and fine sedimentary deposits to rocks and bedrock. The organic soils and sediments play an important role in the process of detaining and removing dissolved and particulate nutrients (such as nitrogen and phosphorus) from the surface water above. They also serve as traps for toxic substances such as heavy metal compounds.

Land under Water bodies and Waterways, in conjunction with Banks, serves to confine floodwater within a defined channel during the most frequent storms. Filling within this channel blocks flow which in turn causes backwater and overbank flooding during such storms. An alteration of land under Water bodies and Waterways that causes water to frequently spread out over a larger area at a lower depth increases the amount of property which is routinely flooded. Additionally, it results in an elevation of water temperature and a decrease in habitat within the main channel, both of which are detrimental to fisheries, particularly during periods of warm weather and low flows.

Land within 100 feet of any water body or waterway is likely to be significant to the protection and maintenance of the water body or waterway and therefore to the protection of the interests which these water bodies serve to protect.

The plant community composition and structure, hydrologic regime, topography, soil composition, and water quality of water bodies and waterways provide important food, shelter, migratory and overwintering areas, and breeding areas for wildlife and fish.

(2) Definitions, Critical Characteristics, and Boundary

- (a) Water bodies and waterways are any creek, stream, river, watercourse, pond, lake, or ditch, whether natural or man-made.
- (b) Water bodies and waterways includes the land beneath any creek, stream, river, pond, lake or ditch in addition to the water body itself. Said land may be composed of organic muck or peat, fine sediments, gravel, or rock.
- (c) The physical characteristics and location of land under Water Bodies and Waterways specified in the foregoing subsection 2(a) are critical to the protection of the interests specified in Section 2.03(1) above.
- (d) The boundary of the waterbody or waterway is the mean annual low water level.

(3) Performance Standards

- (a) Any proposed work, permitted by the Commission, within a Water Body or Waterway, or on land under a Water Body or Waterway, shall not impair the water-carrying capacity of the defined channel, which is provided by said land in conjunction with the banks; ground water and surface water quality; the capacity of the Water Body or Waterway to provide breeding habitat, escape cover, and food for fisheries; and the capacity of the Water Body or Waterway to provide wildlife habitat.
- (b) The following activities are deemed likely to adversely affect the capacity of the Water Body or Waterway to provide the functions listed above: placing fill so as to alter the composition or topography of the land within the Water Body or Waterway; destroying natural vegetation; discharging any new stormwater runoff to the Water Body or Waterway, with the exception of that which has been treated, prior to discharge, according to the current best management practices; using pesticides or

herbicides within the Water Body or Waterway; and dredging so as to alter the depth, vegetation, or substrate composition of the Water Body or Waterway.

2.04 BORDERING LAND SUBJECT TO FLOODING

(1) Preamble

Bordering Land Subject to Flooding is an area which floods from a rise in a bordering waterway or water body. Such areas are likely to be significant to flood control and storm damage prevention, and to wildlife habitat.

Bordering Land Subject to Flooding provides a temporary storage area for flood water which has overtopped the bank of the main channel of a creek, river or stream, or the banks of a pond or lake. During periods of peak runoff, flood waters are retained (i.e. slowly released through surface discharge) by Bordering Land Subject to Flooding. Over time, incremental filling of these areas causes increases in the extent and level of flooding by eliminating flood storage volume or by restricting flows, thereby causing increases in damage to public or private properties. Where Bordering Land Subject to Flooding is composed of mineral soils, it provides an important site for groundwater recharge.

Bordering Land Subject to Flooding is likely to provide important wildlife habitat, with the exceptions of those portions which have been so extensively altered by human activity that their important wildlife habitat functions have been effectively eliminated (such as paved and graveled areas, lawns, golf courses, cemeteries, and roadways). The hydrologic regime, plant community composition and structure, topography, soil composition and structure, proximity to water bodies and waterways, and to vegetated wetlands, enable Bordering Lands Subject to Flooding to provide important food, shelter, migratory and overwintering areas, and breeding areas for wildlife.

(2) Definitions, Critical Characteristics, and Boundaries

- (a) Bordering Land Subject to Flooding is an area with low flat topography adjacent to and inundated by flood waters rising from creeks, rivers, streams, ponds, lakes, or watercourses. It extends from the banks of these waterways and water bodies; where a vegetated wetland occurs, it extends from the upper boundary of said wetland.
- (b) The topography, vegetation and location of Bordering Land Subject to Flooding specified in the foregoing subsection 2(1) are critical to the protection of the interests specified in Section 2.04.
- (c) The boundary of Bordering Land Subject to Flooding is the estimated maximum lateral extent of flood water which will theoretically result from the statistical 100-year frequency storm. Said boundary shall be that determined by reference to the most recently available flood profile data prepared under the National Flood Insurance Program (NFIP) currently administered by the Federal Emergency Management Agency (FEMA). Said boundary, so determined, shall be presumed accurate. This presumption may be overcome only by credible evidence from a registered professional engineer or other professional competent in such matters.

Where NFIP profile data are unavailable, the boundary of Bordering Land Subject to Flooding shall be the maximum lateral extent of flood water which has been observed or recorded. In the absence of such observations or records, the estimated maximum lateral flood water which will theoretically result from the statistical 100-year frequency storm shall be determined by a registered professional engineer.

(3) Performance Standards

Any proposed work, permitted by the Commission, on Land Subject to Flooding shall not result in the following:

- (a) Flood damage due to filling which causes lateral displacement of water that would otherwise be confined within said area.
- (b) Any impairment of the capacity of said area to provide important wildlife habitat functions.

2.05 ISOLATED LAND SUBJECT TO FLOODING

(1) Preamble

Isolated Land Subject to Flooding is an isolated depression or closed basin which serves as a ponding area for runoff or high ground water which has risen above the ground surface. Such areas are likely to be locally significant to flood control and storm damage prevention, and to wildlife habitat. In addition, where such areas are underlain by pervious materials they are likely to be significant to public or private water supply and to ground water supply. Finally, where such areas are underlain by pervious material covered by a mat of organic peat and muck, they are also likely to be significant to the prevention of pollution.

Isolated Land Subject to Flooding provides a temporary storage area where runoff and high ground water pond and slowly evaporate or percolate into the substrate. Filling causes lateral displacement of the ponded water onto contiguous properties, which may in turn result in damage to said properties.

Isolated Land Subject to Flooding, where it is underlain by pervious material, provides a point of exchange between ground and surface waters. Contaminants introduced into said area, such as septic system discharges and road salts, find easy access into the ground water and neighboring wells. Where these conditions occur and a mat of organic peat or muck covers the substrate of the area, said mat serves to detain and remove contaminants which might otherwise enter the ground water and neighboring wells.

Isolated Land Subject to Flooding which meets the definition of vernal pool provides essential breeding sites for amphibians and invertebrates.

(2) Definitions, Critical Characteristics, and Boundaries

- (a) Isolated Land Subject to Flooding is an isolated depression or closed basin within out an inlet or outlet. It is an area which at least once a year confines standing water to an average depth of six (6) inches and an average surface area of 2,000 square feet.
- (b) Isolated Land Subject to Flooding may be underlain by pervious material, which in turn may be covered by a mat of organic peat and muck.
- (c) The characteristics specified in the previous subsection (2)(b) are critical to the protection of the interests specified in Section 2.05.
- (d) The boundary of Isolated Land Subject to Flooding is the perimeter of the largest observed or recorded volume of water confined in said area. In the absence of such observations, the boundary shall be established as the maximum lateral extent of water retained during the statistical 100-year frequency storm.

(3) Performance Standards

Any proposed work, permitted by the Commission, on Isolated Land Subject to Flooding shall not result in the following:

- (a) Flood damage due to filling which causes lateral displacement of water that would otherwise be confined within said area.
- (b) An adverse effect on public or private water supply or ground water supply, where said area is underlain by pervious material.
- (c) An adverse effect on the capacity of said area to prevent pollution of the ground water, where the area is underlain by pervious material which in turn is covered by a mat of organic peat and muck.
- (d) Any impairment of the capacity of said area to provide important wildlife habitat functions.

2.06 LAND WITHIN 100 FEET OF A WATER BODY, WATER WAY, BANK, OR VEGETATED WETLAND (THE BUFFER ZONE)

(1) Preamble

Land within 100 feet of a Water Body, Waterway, Bank, or Vegetated Wetland (The Buffer Zone) is likely to be significant to wildlife, public and private water supply, and to the prevention of pollution.

The plant communities and soils of these areas, where these are composed of natural vegetation and indigenous soils, provide important shelter, nesting, feeding, and migratory areas for wildlife associated with the adjacent wetlands. Many wildlife species which feed or breed in wetlands require adjacent undisturbed upland areas for critical

portions of their life cycles. Other wildlife, which perform key ecological roles in wetlands, may nest or perch in areas immediately adjacent to wetlands. Forested upland vegetation, where this occurs directly adjacent to forested Vegetated Wetlands, provides an important buffer that maintains air temperatures, light regimes, and habitat quality within the Vegetated Wetland.

The natural vegetation found in upland areas adjacent to wetlands provides key functions in the attenuation and uptake of pollutants that would otherwise be discharged to water bodies or wetlands. These areas act as filters which may prevent erosion and decrease the non-point source loading of contaminants that may alter the water quality of wetlands and other surface waters.

The natural vegetation found in areas adjacent to water bodies provides shade and cover that moderates temperatures and is important to the protection of fisheries.

Areas of natural, undisturbed upland soils adjacent to wetlands have been shown to provide key areas for seasonal groundwater recharge that protects public and private groundwater supplies or that maintains base flow and water quality in streams during low flow periods.

Construction that occurs within 100 feet of water bodies, waterways, banks, or vegetated wetlands is likely to result in the alteration of the resource area through siltation, overgrading, or deposition of construction debris. Following construction, activities within this area frequently result in impacts to wetlands from the deposition of lawn debris, increased runoff, siltation, and increased temperature or nutrient loading. These subsequent, unregulated alterations are common in areas where development occurs in close proximity to Water Bodies, Waterways, Banks, or Vegetated Wetlands.

(2) Definitions, Critical Characteristics, and Boundaries

- (a) The Buffer Zone consists of all upland areas within 100 feet of the areas listed in 1.02(1)(a) and 1.02(1)(b) above.
- (b) The physical characteristics, including topography, soils and vegetation, of this area are critical to the protection of the interests as specified in Section 2.06(1).
- (c) The upper boundary of the Buffer Zone is defined as the line which is 100 feet from the upper limit of Bank or Vegetated Wetland. Where both Bank and Vegetated Wetland are present, the limit of the Buffer Zone is the line 100 feet from either the Bank or the Vegetated Wetland, whichever is furthest. The lower boundary of the Buffer Zone is the upper limit of Bank or Vegetated Wetland. Where Bordering Land Subject to Flooding occurs upgradient of a Bank or Vegetated Wetland, the lower limit of the Buffer Zone is the upper limit of Bank or Vegetated Wetland.

(3) Performance Standards

The performance standards listed below are critical to the protection of the Interests of the Bylaw. These include short- and long-term protection of the wildlife habitat capacity

and water quality within the adjacent Water Body, Waterway, Bank, or Vegetated Wetland, as well as the wildlife habitat present within the Buffer Zone and adjacent resources.

- (a) No construction within 25 feet of the limit of Bank or Vegetated Wetland may be permitted. Construction is here defined to include all roadways, driveways, buildings, decks, clearing and grading, stormwater detention basins, and point-source discharges. Any construction within the Buffer Zone must be designed to preserve a minimum of 25 feet of undisturbed natural vegetation and soils adjacent to a Vegetated Wetland or Bank.
- (b) Where the Buffer Zone provides wildlife habitat (i.e., is forested, meadowland, or otherwise undeveloped except for lawful existing lawn and ornamental or vegetable gardens), no alteration of vegetation or construction within 50 feet of the limit of Vegetated Wetland or Bank is permitted.
- (c) No construction may be permitted within 100 feet of a Vernal Pool, as defined in Section 1.04 above.
- (d) No work within the Buffer Zone shall impair the water quality, water temperature, or wildlife habitat of the adjacent Water Body, Waterway, Bank, or Vegetated Wetland.
- (e) Where new point-source discharges are proposed within the Buffer Zone, a comprehensive stormwater management system shall be designed that will not degrade the values or functions of the receiving or downstream Water Bodies, Waterways, or Vegetated Wetlands, surface water, or ground water. Such stormwater management systems shall employ Best Management Practices. Any point-source discharge must be designed to discharge water at non-erosive velocities equal to 2 c.f.s (cubic feet per second) or less.
- (f) Where stormwater detention basins (including any infiltration or recharge basins) are proposed within the Buffer Zone, these shall be designed to be maintenance-free, self-cleaning, and to deter acts of vandalism. The inlet and outlet shall be designed to avoid scour and erosion of the basin bottom and discharge channel. The basin must be designed to avoid or minimize direct flows between the inlet and outlet, and to maximize the stormwater residence times.
- (g) Erosion and sedimentation controls must be utilized for any construction within the Buffer Zone which will result in exposed soils. An erosion and sedimentation control plan must be prepared which provides specifications for temporary and permanent soil stabilization, using Best Management Practices. No silt or sediment may be permitted to enter wetland resource areas during or subsequent to construction.

